



**COPY OF PAPERS
ORIGINALLY FILED**

Unlike other organs, the heart is constantly beating, and fast scanning is needed to image the heart faster than it beats. The fact that the heart beats continually, and the beating is increased by exercise, enables scanning of the heart while exercising to be compared to the heart at rest. The heart is first imaged at rest and then during an established protocol for exercise such as the Bruce protocol. Cardiopathic scars in the heart such as from a myocardial infarction will often be indicated by a scan during exercise, showing both electrical and wall motion (contractility) abnormalities. Along with the ECG, echocardiography can employ a two-step platform, a treadmill or a stationary bicycle for physical exercise but requires a technician to hold the transducer. It is less costly even though PET and helical CT scanning may be more accurate. Since they are done with the patient more confined, CT, PET and MRI scanning need to use chemical inotropic means such as dobutamine more, but even with echocardiography which can be done in conjunction with a treadmill, the lack of body movement renders improved imaging. Of course, if the patient is unable to exercise at all, regardless of the means used to scan, inotropic drugs are required.

There has been literature reporting the use of d-ribose in energizing cardiac muscle that has been compromised by ischemia resulting in cardiopathic segments. As a result of this research it has been noted by Pliml, et al. that when ribose in substantial amounts is given to individuals with coronary artery disease, there is identification of nearly twice the number of reversible thallium 201 defects with the use of ribose than with placebo. Pliml was not interested in detecting new defects diagnostically but rather used subjects whose defects were already known in an effort to make angina pain less and reduce ST segment